

## **BIOGRAPHICAL SKETCH**

Robert S. Ryan

Mr. Robert (Bob) S. Ryan is currently consulting with Industry and Government on Aerospace Engineering. Mr. Ryan has consulted with Boeing on the Space Station, Lockheed Martin on the Space Shuttle Super Light Weight Tank, and with National Aeronautics and Space Administration (NASA) on the Space Launch Initiative (SLI), the Next Generation Launch Technology (NGLT), and the Orbital Space Plane (OSP) and is currently consulting on CLV. He is a Technical Training Coordinator for NASA, as an Alabama Signal Research, Incorporated (ASRI) employee, teaching “Lessons Learned”, “Space Launch and Transportation Design”, and “Coaching and Mentoring” courses. In conjunction with others he is involved in two activities: 1. Developing the Technical Integration Design Approach, also Concept Selection, with two other NASA Retirees, for Launch Vehicles and 2. Serves as Editor and author, with others, on a Textbook for Space Transportation System Design. He served recently as chairman of the investigation of the X-33 Composite Fuel Tank Failure, as a member of the Air Force Inertial Upper Stage (IUS) failure and the Joint NASA Air Force Launch Vehicle Integration Team (120 day study). Mr. Ryan conducts workshops and seminars at Universities, Industries, NASA, and other Government Agencies.

Mr. Ryan served as the Deputy Director of the Structures and Dynamics Laboratory at NASA’s George C. Marshall Space Flight Center (MSFC) in Huntsville, Alabama from July 1990 until retirement May 3, 1996 and as Assistant Laboratory Director from January 1989 to July 1990. Mr. Ryan assists the Laboratory Director in planning, directing, coordinating research and development, engineering and technical management of 400 personnel in the areas of dynamic environment, specification of dynamics and structural related design criteria, control systems, structural dynamics, aerophysics, structural design, simulation, and structural testing consisting. He has had laboratory responsibility for directing activities for the Shuttle System, Space Shuttle Main Engine, external tank, Hubble Space Telescope, Advanced X-ray Astrophysics Facility, Orbital Maneuvering Vehicle, Aeroassist Flight Experiment, Spacelab, Science Experiments, and International Space Station; and has served as a laboratory member or lead of review boards for these and other projects. He was a member of the Space Shuttle Ascent Flight Integration Working Group from its inception, becoming co-chair of the group in the early 80’s for six years.

From 1974 to 1989, Mr. Ryan was Chief of the Structural Analysis Division at Marshall Space Flight Center. He was responsible for the management and technical direction of 95 civil service employees and technical direction of contracts associated with all NASA projects managed by Marshall Space Flight Center. Technical disciplines managed were structural modeling, dynamic test, acoustics, vibroacoustics, vibration, dynamic responses, loads, aeroelasticity, rotary dynamics, shock, qual and acceptance testing, stress, fatigue, and fracture mechanics.

From January 1956 to 1974, he served as an Aerospace Engineer and Aerospace Engineering Manager; first for the Army Missile Command (thru July 1960) and then for NASA, working in the areas of structural analysis and control system analysis.

From 1948 to 1956, he taught high school math and science and coached, winning two Class A State Basketball Championships (1951 and 1956), one-second place (1952), and one-third place (1954), four 8th District Championships, and two Morgan County Championships.

Mr. Ryan has published numerous (100 plus) American Institute of Aeronautics and Astronautics (AIAA) and NASA professional papers and reports. He was a NASA Flight Honoree for the Space Shuttle 100th flight October 2000, and received from NASA the Outstanding Leadership Medal in 1994; the Exceptional Service Medal in 1973, 1981, and 1988; Certificate of Merit in 1966; Director's Commendation in 1973 and 1993; Sustained Superior Performance Awards in 1959, 1972, and 1979; Outstanding Performances in 1958, 1973, 1978, 1986, 1987, 1998, 1989, 1994, and 1995; and Group Achievement Awards in 1968, 1971, 1972, 1979 (he received three), 1980, 1982 (he received two), 1983 (he received three), 1986, 1993, and 1993.

Mr. Ryan is an Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA). In 1986, he was named the Mississippi-Alabama Section AIAA Engineer of the Year and in 1988 he was given the Hermann Oberth Award by the Alabama-Mississippi Section of the AIAA. In 1994, he received the AIAA Structures Dynamics and Materials (SDM) Medal. He was awarded the First AIAA Crichlow (\$100,000) Trust Prize in 1995.

In 1988 the University of Alabama named him the 150th Anniversary Distinguished Engineering Fellow and in 1995 he was named University of North Alabama Alumni of the Year; he was inducted into the Morgan County Sports Hall of Fame in June 1996. Mr. Ryan has three degrees: Bachelor of Science in Mathematics, Physical Science and Secondary Education from the University of North Alabama, Master of Arts in Administration from Peabody College, now a Division of Vanderbilt University, and Master of Science in Engineering Mechanics from the University of Alabama, Tuscaloosa.

Mr. Ryan is widowed. He has two sons who are engineers with NASA and six grandchildren. His hobbies include woodworking, reading, travel, and photography. He is a deacon and Sunday School Teacher in The First Baptist Church of Madison.

He was chairman of Parks and Recreation Board, City of Madison, 4 years. 1980's. Initiated a total sports and recreation program and hire a recreational director.

He was chairman of Community School Board, City of Madison, (3 years). 1980's. Led to the acquisition of the Bob Jones High School in Madison using the community school approach where the city of Madison supplemented the Madison County Board of Education to improve the schools. (Madison was busing students 20 Miles to Sparkman High School.) A few years after leaving the board the city of Madison formed an independent school system.

.